Q.630.7 IL6c no.**8**98 1979 cop.5



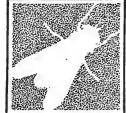
Digitized by the Internet Archive in 2014 With funding from University of Illinois Urbana-Champaign

http://www.archive.org/details/1979insectpestma81979univ

	-3.	J)
	V	
		,







# 1979 Insect Pest Management Guide LIVESTOCK and LIVESTOCK BARNS

You must be certified as a pesticide applicator to use restricted-use pesticides. See your county Extension adviser in agriculture for information.

LIVESTOCK PRODUCERS must manage insect pests to attain maximum production. Flies, lice, mites, ticks, and grubs irritate animals and some suck their blood. This reduces meat, milk, and egg production. On occasion, individual animals have been killed by attacks of large numbers of pests like horse flies, lice, and mites. Several of these pests transmit diseases from animal to animal. Losses from pests each year cost Illinois farmers millions of dollars. A livestock producer does not need to share his profits with insects — they can be managed effectively.

Insect pest management programs, which include the wise selection of cultural, mechanical, biological, and chemical methods, are suggested for the major insect pests of livestock and livestock barns. Insecticides are still the most efficient means of managing most insect problems. Only the safest, most effective insecticides are suggested for each specific insect on each type of livestock. Other insecticides that may have label approval for use on livestock are not included because they are less effective or more toxic or present potential residue problems. Blank spaces in the table of limitations (page 4) mean we do not suggest the insecticide for that specific use in Illinois.

In using insecticides read the label and follow instructions. Do not exceed the rates suggested; observe the interval between application and slaughter and apply only to those animals for which use has been approved. Keep a record of the insecticide used, trade name, percentage of active ingredients, dilution, rate of application, and dates of application. If you are ever questioned, you have the records.

Most of the insecticides are suggested for use as emulsion concentrates since these are the easiest formulations to handle. Wettable powders can be substituted if the finished spray is well agitated.

Chemical names in these tables may be unfamiliar to you. These names are the common coined chemical names and are not capitalized. Trade names are capitalized. In the table of limitations (page 4) common names are listed first. If the trade name is more commonly used, it is listed in parentheses after the common name. In the tables of suggested insecticides on pages 2 and 3, only the common name is used if there is onc. In case of question, refer to the table of limitations.

These suggestions are printed annually. Always use the current year's issue. Labels may be cancelled and a product removed from the market at any time. New labels may be granted. We attempted to anticipate any further label changes, but there may be an occasional change. Check with your county Extension adviser if you are not sure about the insecticide you plan to use. We will make announcements of label changes through the news media to keep you up to date.

Insecticides are being classified for general use or restricted use by the U.S. Environmental Protection Agency. Only a few insecticides have been classified for restricted use at this time. None of the insecticides listed in this eircular have a restricted-use classification. A person wishing to use an insecticide classified for restricted use must be certified as a private or commercial pesticide applicator by the State of Illinois. Contact your county Extension adviser in agriculture for details on this program.

The Illinois Department of Public Health has announced it is illegal for dairymen to apply or store chlorinated-hydrocarbon insecticides — aldrin, chlordane, dieldrin, endrin, lindane, or heptachlor - on their farms, except for use in farm residences. Previously, use of DDT was prohibited except by permit from the Illinois Department of Agriculture or Public Health.

Suggestions for use of insecticides are based on available data. Rainfall, temperature, and many other factors affect efficiency of insecticides. Report the details of control failures to us.

These suggestions were prepared by entomologists of the University of Illinois College of Agriculture and the Illinois Natural History Survey.

Leaflets describing the life history, biology, and habits of some of the insects mentioned can be obtained from offices of county Extension advisers or by writing to Entomology Extension, 169 Natural Resources Building, Urbana, Illinois 61801. These are indicated by an NHE number in the tables.

Obtain the following circulars on insect control from the Office of Agricultural Publications, 123 Mumford Hall, Urbana, Illinois 61801.

Circular 899, 1979 Insect Pest Management Guide — Field

Circular 900, 1979 Insect Pest Management Guide -Home, Yard and Garden Circular 925, Insect Pests of Cattle

#### DAIRY CATTLE, BEEF CATTLE, SWINE, AND SHEEP

### (Refer to the table of limitations on the back page before using insecticides)

Insect		Insecticide	Amount per 100 gal. water or as directed	How to apply					
Dairy Cattle	Lice and mange	crotoxyphos 14.4% E.C.	6 pt.	1 gal. per animal. Spray entire animal t saturation. Make 2 treatments 14 day apart.					
	(NHE-18)	Ciovap   crotoxyphos 10.0% +   dichlorvos 2.5% E.C.	2 gal.						
	Face flies <sup>1</sup>	crotoxyphos 14.4% E.C.	2qt.per3gal.water	1-2 oz. per animal; 2-4 times per week.3					
	(NHE-106) Horn flies <sup>1</sup>	Ciovap 1.25% O. <sup>2</sup>	Ready to use						
	(NHE-59) Stable flies <sup>4</sup> (NHE-61)	Ciovap 12.5% E.C.	1 qt. per 3 gal. water	1 pt. per animal per week or 1-2 oz. per animal 2-4 times per week from small hand sprayer or mist blower. <sup>3</sup>					
Pastured	Horn flies <sup>1</sup>	dichlorvos 1.0% O.2	Ready to use	1-2 oz. per animal daily.3					
cattle	Stable flies4	pyrethrin 0.1% + synergist O.2	Ready to use						
only	Horse and deer	pyrethrin 0.5% + synergist O.2	Ready to use	2 oz. per animal 3 times per week.3					
	flies <sup>5</sup> (NHE-60)	pyrethrin 1% + synergist E.C.	10 gal.	1-2 qt. per animal every 3 days.3					
	Horn flies	crotoxyphos 3.0% D. or 1.0% O.	In dust bags	Use only in exits of milk parlors, barns,					
		coumaphos 1.0% D. or 1.0% O.	or face and	lanes. Apply daily. Only partially contro					
		stirofos 3.0% D. or 1.0% O. dichlorvos 0.25% O. ronnel 1.0% O.	back oilers	face and stable flies. Helps suppress lice infestations.					
Beef Cattle	Lice and mange	crotoxyphos 14.4% E.C.	6 pt.	1 gal. per animal. Spray animal to satu					
	(NHE-18)	Ciovap 12.5% E.C.	2 gal.	ation. Make 2 applications 14 days apart					
	Lice	ronnel 24.5% E.C.	1 qt. per gal. water	Apply 1 oz. per 100 lb. body weight. Max					
Face flies <sup>t</sup> Horn flies <sup>t</sup>		fenthion 7.6% E.C.	1 pt. per gal. water	imum of 8 oz. per animal. Pour on topling from shoulders to hips. Repeat in 14 days					
		Ciovap 12.5% E.C.	1 qt. per 3 gal. water	1-2 oz. per animal; 2-4 times per week from a mist blower.3					
	Stable flies	1,107,00	2 1	1 pt. per adult animal per week.3					
Pastured cattle	Stable flies4	crotoxyphos 14.4% E.C.		_1-2 oz. per animal; 2-4 times per week from _automatic sprayer.³					
only	Horn flies <sup>1</sup>	Ciovap 1.25% O. <sup>2</sup>	Ready to use						
,	norn nies.	Dust bags and oilers: Various insecticides are approved for use in face oilers, back oilers, and dust be and oilers: Force treat if possible, but always place in location for greatest use. Only particular controls stable and face flies. Keep device well charged and in good working order.							
	Horse and deer flies1	Use as directed for dairy cattle a	bove.						
Grubs	Grubs	Systemic insecticides like coumaphos, fenthion, phosmet, and trichlorfon, as sprays provide excellent control of grubs and good control of lice. Use only on native beef cattle in herds having a history of grub problems. Treat only those animals between 4 months and 2½ years of age. Apply during August or September in the southern half of the state and in September or October in the northern half of the state. Animals in confinement are not attacked by ox warble flies.							
Swine	Mange and lice	malathion 50-57% E.C.	1 gal.	2-4 qt. per animal. Spray animal to saturation. Make 2 applications 14 days apart.					
	Lice	fenthion 3% O.	Ready to use	Apply ½ oz. per 100 lb. body weight. Pour on topline from neck to rump.					
		ronnel 5% G.	Ready to use	Apply ½ lb. per 100 sq. ft. of bedding.					
	Keds, lice, fleecc- worms, and scab (NHE-53)	toxaphene 60% E.C.	3 qt. <sup>5</sup>	Spray animal to saturation or use in dip ping vat for scab. <sup>6</sup>					
	Keds and lice	diazinon 50% W.P.	$\frac{1}{2}$ oz. per 3 gal. water	Apply 1 qt. per animal from sprinkling can over back, head, and neck. <sup>7</sup>					
		ronnel 24.5% E.C.	Ready to use	Apply 3cc. (ml.) per 50 lb. of body weigh as a spot-on along center line of the back.8					

Note: E.C. =emulsion concentrate, O. = oil solution, W.P. = wettable powder, D. = dust, G. = granule.

¹ Place cattle in barns or sheds to avoid attack by face flies, horn flies, horse flics, and deer flies.

² The same dosage of a water-base spray may be used.

³ Spray head, back, sides, belly, and legs carefully. Start treatments in late May or early June and continue to September.

⁴ Remove decaying straw, hay, manure, and feed from barns and lots, and spread to dry each week or cover manure pile with black plastic so stable fly breeding will be reduced.

⁶ Add 2 pounds of detergent per 100 gallons of spray for better wetting effects.

⁶ Official scab cradication treatment used by the State Department of Agriculture. Involves two dippings 10–14 days apart. Isolate and treat incoming animals before introducing them into the flock.

¹ Stir the diazinon suspension frequently.

Stir the diazinon suspension frequently.

<sup>&</sup>lt;sup>8</sup> Use on short-wooled sheep, no more than 6 weeks after shearing.

Q.630.7 JD6C 1949

AGX

## GOATS, HORSES, CHICKENS, LIVESTOCK BARNS, AND SHEDS

COP (Refer to the table of limitations on the back page before using insecticides)

	Insect	Insecticide	Amount per 100 gal. water or as directed	How to apply				
Goats Pastured	Face flies¹ Stable flies	Ciovap 12.5% E.C.	1 qt. per 3 gal. water	Apply 1 pt. per animal per week.				
goats only	Horse and deer flies <sup>1</sup>		Use pyrethrin as	s directed for dairy cattle.				
	Lice	Ciovap 12.5% E.C.	2 gal.	Apply 2-4 qt. per animal. Repeat in 1 days.				
Horses  Pastured	Face flies¹ Stable flies²	stirofos 1.0% + .09% synergized pyrethrin + 1.3% repellent O.	Ready to use	Apply 1-2 oz. as a wipe on or spray over entire animal 2-4 times per week. <sup>3</sup>				
horses only	Horse and deer flies <sup>1</sup>		Use water-base	spray of pyrethrin as for dairy cattle.3				
	Black flies <sup>1</sup>	petroleum jelly	Ready to use	Apply a thin coating on inside of ears. Us stirofos as suggested above for flies.				
	Lice	malathion 4.0-5.0% D.	4-3 tbl. per animal	Apply on back and neck of animals. Repeain 14 days.				
Chickens	Northern fowl mites, common	carbaryl 80% W.P.	4 oz. per 5 gal. water	Spray birds using 1 gal. per 100 birds fowl mites and lice. Spray roosts, walls, a				
	red mites, bed- bugs, and lice	stirofos 50% W.P.	6.5 oz. per 5 gal. water	around nests for red mites and bedbug Dust of 5% carbaryl, 0.5% coumaphor 4% malathion, or 3% stirofos may be use				
	(NHE-54)	coumaphos 25% W.P.	5 gal water on litter for control of r					
		malathion 50–57% E.C.	5 oz. per 5 gal. water <sup>4</sup>	—and lice. Keep wild birds from entering onesting in poultry houses.				
		stirofos 24% E.C.6	13 oz. per 5 gal. water	_				
		Ravap {stirofos 23% + dichlorovos 6% E.C.	13 oz. per 5 gal. water	_				
Sprays for Livestock	House flies (NHE-16, 88) Stable flies, and other flies	fenthion 45% E.C.	3 gal.	Start treatments in June and maintai good sanitation. Apply 2 gal. per 1,000 so ft. or to runoff to ceilings, walls, and support posts, and outside around doors an windows. Lasts about 4-6 weeks. <sup>5</sup>				
		diazinon 50% W.P.	16 lb.	Lasts about 2-3 weeks. Apply as for fer thion. Do not use in dairy or poultry barns				
		dimethoate 23% E.C.	4 gal.	Lasts about 3-4 weeks. Apply as for fer thion.				
		stirofos 24% E.C.6	4 gal.	Lasts about 2-4 weeks. Apply as for fer				
		Ravap 29% E.C.	4 gal.	thion.				
		ronnel 24.5% E.C.	4 gal.	Lasts about 1-2 weeks. Apply as for fer thion.				
Space Sprays for Feed Lots and Sheds <sup>2</sup>	House flies Stable flies, and	dichlorvos 23% E.C.	2 gal.	Apply 5 gal. per acre with mist blower over animals and pens every 3 to 7 days.				
	other flies	naled 37% E.C. <sup>7</sup>	1 gal.	Apply as for dichlorvos.				
		pyrethrin E.C.	Dilute to 0.1% with water	Apply as for dichlorvos.				
Baits as Supplements for Livestock Barn and Shed Sprays <sup>2</sup>	House flies	dichlorvos 23% E.C.	4 oz. per 1 gal. corn sirup + ½ gal. warm water	Apply to favorite fly-roosting areas fror tank sprayer as needed to supplement residual spray treatment.				
		naled 37% E.C.	2 oz. per 1 gal. corn sirup + ½ gal. warm water	Apply as for dichlorvos.				

Note: E.C. =emulsion concentrate, O. = oil solution, W.P. = wettable powder, D. = dust.

Place horses or goats in barns or sheds to avoid attack by face flies, black flies, horse flies, deer flies, and mosquitoes.

Good sanitation is the basic step in barn fly control (house and stable flies). Remove manure, decaying straw, hay and feed, and spread to dry each week or cover manure pile with black plastic. Leave a 4-6 inch residue of manure in the pits or pens if the interval between cleanups is more than 1 week.

\* Spraying may upset horses. Avoid getting spray into the animal's eyes. Use rubber gloves when wiping on insecticides.

\* Double the insecticide-to-water ratio for spraying roosts, walls, and around nests.

\* Lasting effects are shortened during periods of hot, dry weather.

\* A wettable-powder formulation can be substituted if the finished spray is well agitated.

\* Temporary stinging of eyes may occur from mist, but this is not hazardous. Rinse equipment thoroughly after use to avoid corrosion.

# LIMITATIONS FOR SUGGESTED INSECTICIDES APPLIED TO LIVESTOCK OR IN LIVESTOCK BARNS (Blank spaces in the table mean that the material is not suggested for that specific use in Illinois)

	Dairy		Beef		Swine		Sheep		Goats		Horses		Chickens	
	Animals	Barns	Animals	Barns	Animals	Barns	Animals	Barns	Animals	Barns	Animals	Barns	Birds	Barns
carbaryl (Sevin)													A,B	A,B
Ciovap			C,D,E,F						C,D,F,C	3				
coumaphos (Coral)			C,D,E										В	В
crotoxyphos (Ciodrin)			C,D,E,F											
diazinondichlorvos (DDVP)				D,I		D,H	C,D,I	D,H		• • •		D,H		• • •
(Vapona)	C,D	J,K	C,D	ЬK		J,K		J,K	l . <i></i>	J,K		J,K		Ţ
dimethoate (Cygon)		D,H		Ď,H		Ď,H		Ď,H		Ď,H		Ď,H		D,H
fenthion (Baytex,										,		_ ,		-,
Tiguvon, Lysoff)		D,H	C,D,E,L	D,H	M,N	D,H		D,H		D,H		D,H		В
malathion					C,D						C,D		В	В
naled (Dibrom)		C,J,K		J,K		J,K		J,K		J,K		J,K		ī
phosmet (Prolate)			C,D,E,O						,					
pyrethrin	C	K	C	K		K		K	C	K	С	K		
Ravap		D,H		D,H		$_{ m D,H}$		D,H	,	D,H		D,H	B,P	В
ronnel (Korlan)		D,H	C,D	D,H	C,N	D,H	C,D,Q	D,H	,	D,H		D,H		В
stirofos (Rabon)	C,D	D,H		D,H		D,H		D,H		D,H	C,D	D,H	B,P	В
toxaphene							C,Q							
trichlorfon (Neguvon)			C,D,E,M											

- Do not apply within 7 days of slaughter and do not treat nesting material. Do not repeat within 4 weeks.
- Gather eggs before treatment and do not contaminate feed and water.
- Do not contaminate feed, water, milk, or milking equipment. D Do not apply in conjunction with the feeding of phenothiazine or organophosphate insecticides.
- E. Do not treat: animals less than 6 months old; sick or stressed animals within 10 days of shipping; or animals in a confined, nonventilated area
- Do not apply within 1 day of slaughter and do not treat Brahman cattle.
- Do not repeat more often than every 7 days.
- H. When used as a spray, remove animals before treating barn. Do not contaminate feed, water, eggs, milk, or milking equipment. Do not use in milk storage rooms. Do not apply to animals.
- Do not apply within 14 days of slaughter. Do not treat lambs less than 2 weeks old.
- As a bait. Do not apply within reach of animals or in milk rooms. Do not contaminate feed, water, eggs, milk, or equipment.
- K. As a space spray in feed lots, corrals, or pens; may be applied with animals present, but avoid direct application to exposed feed and water. Do not apply in conjunction with the feeding of phenothiazine or the feeding or use as animal or shelter treatments of organophosphate or carbamate insecticides.
- L. Do not apply within 45 days of slaughter. M. Do not apply within 14 days of slaughter.
- N. Do not use in conjunction with organophosphate or carbamate insecticides.
  O. Do not apply within 21 days of slaughter. Do not repeat treatment within 10 days.
- Do not repeat more often than every 14 days. If used on walls for fly control, do not apply to birds.
- Q. Do not apply within 28 days of slaughter.

#### FOR YOUR PROTECTION

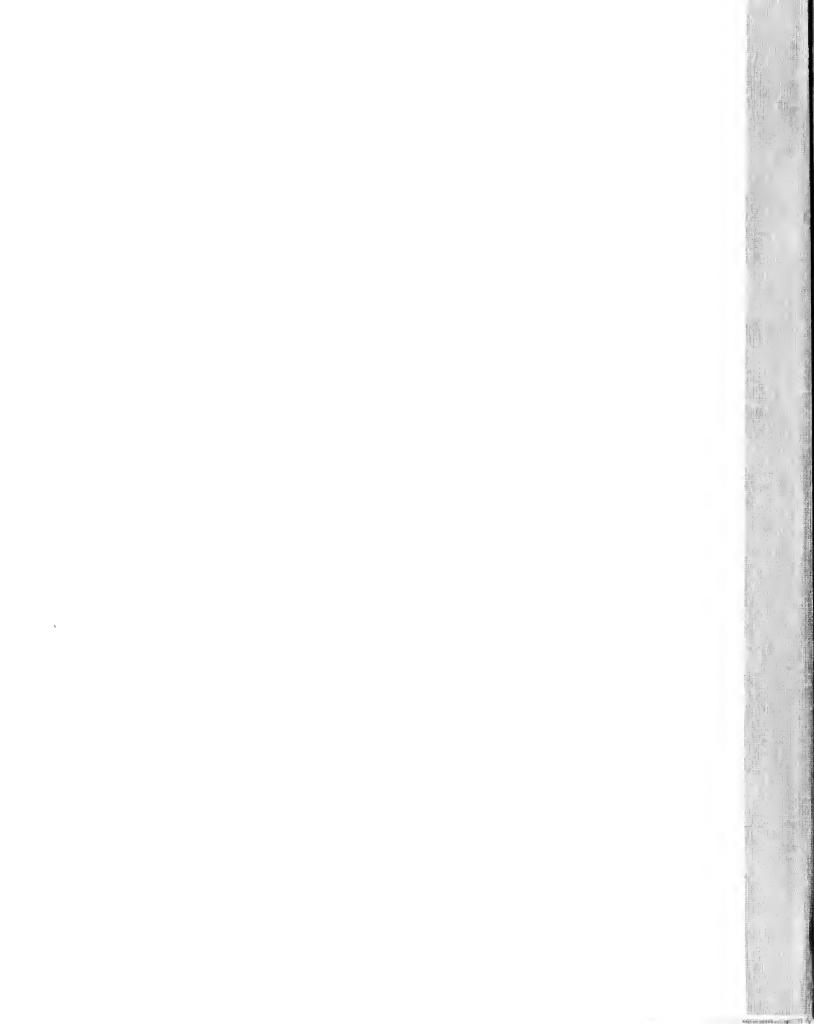
Here are a few easy rules to follow that will prevent most insecticide accidents:

- 1. Wear rubber gloves when handling insecticide concen-
  - 2. Do not smoke while handling or using insecticides.
- 3. Keep your face turned to one side when opening insecticide containers.
- 4. Leave unused insecticides in their original containers with the labels on them.
- 5. Store insecticides out of the reach of children, irresponsible persons, or animals; store preferably in a locked cabinet or room, away from food, feed, or water.
- 6. Triple-rinse and bury or burn empty insecticide containers, or take them to an approved sanitary landfill.
- 7. Do not put the water-supply hose directly into the spray tank.

- 8. Do not blow out clogged nozzles or spray lines with your mouth.
- 9. Wash with soap and water all exposed parts of the body and clothes contaminated with insecticide.
- 10. Do not leave puddles of spray on impervious surfaces.
- 11. Do not apply to or allow runoff into fish-bearing or other water supplies. Do not allow treated animals in fishbearing waters or other water supplies until the spray has dried.
- 12. Do not apply insecticides, except in an emergency, to areas with abundant wildlife or to blossoming crops visited by bees. Avoid drift onto blossoming crops and onto beehives.
  - 13. Do not apply insecticides near dug wells or cisterns.
  - 14. Do not spray when weather conditions favor drift.
- 15. Follow all directions and precautions listed on the label.

Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. JOHN B. CLAAR, Director, Cooperative Extension Service, University of Illinois at Urbana-Champaign. The Illinois Cooperative Extension Service provides equal 12M-11-78-42266-RES opportunities in programs and employment.





UNIVERSITY OF ILLINOIS-URBANA Q.630.7IL6C CIRCULAR URBANA, ILL. 998 REV. 1979

REV. 1979 2 0112 019542353